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ANECDOTES OF THE STEAM ENGINE.

No. VII.

We come now to an important era in the history of the steam engine, that in which James Watt commenced his invaluable exertions in its improvement. He was a mathematical instrument maker at Glasgow and had his attention first directed to the subject in 1759, and in 1762 he began to make experiments. Other pursuits, however, prevented his giving much attention to this, till the year 1765, when "in one of those moments when the heavenly spark of genius shone with brightness in his mind," he conceived the invention of the *condenser*, by which steam is admitted to depress the piston into a vacuum, instead of the atmosphere. When once the idea of separate condensation was started, minor improvements followed in quick succession, and his engines soon acquired a precedence over all others. A vast saving of coal was effected by these engines, and one of the reservations made in their sale was a third part of the saving of coal, which was decided by a machine of clock work attached to the engine. The history of the progress of his inventions and improvements is exceedingly interesting, but requires more room for detail than can well be spared here. There were also other ingenious men engaged in improving the steam engine, whose successes were more or less important.

John Theophilus Cugnot, a Frenchman, in 1763 exhibited a model of a carriage moved by a steam engine instead of horses. In 1769 he was enabled at the public expense to construct a large carriage, the wheels of which were moved by a steam engine similar to that of the model of 1763. At the first trial of this novel vehicle, its movements were so violent as to overturn a wall that was opposed to its progress. This unfortunately produced an opinion, that in consequence of the uncertainty of obtaining proper mechanical control over its motion, it could be of small use in practice. The project was therefore abandoned, and the experimental machine was deposited in the museum of the Arsenal, to become a point of reference to the epigrammatist, and a memorial of the blasted hopes of its accomplished author. Cugnot's genius expanded half a century too soon, either for its value being known, or its efforts cherished.

While Watt was perfecting his engine in England, the count d' Auxiron, of France, succeeded in 1774 in bringing a scheme for moving boats by a steam engine, before a number of individuals who associated for the purpose of enabling him to carry his plan into execution. The experiment was tried on the Seine, near Paris; but the engine by which the wheels were propelled, not having the necessary force, the boat moved so slowly and irregularly, that the company, at whose expense the trial had been made, considered the result offered no inducement to persevere; and judging from what they had seen, navigation by steam, in their opinion, could not supersede, either on the score of speed or economy, the ordinary method of towing by horses. Perier, an able and accomplished mechanic, who assisted in the experiment, repeated the trial with some improvements in the mechanism, in the following year. His engine was an imperfect model, which had been laying about his workshop, of a power about equal to that of one horse. This was placed in a boat, and attached to two wheels, one at each side, with a contrivance to give them a rotary motion. The performance of the model was as defective as that used by d' Auxiron, and the boat moved but slowly against the current of the Seine. Perier abandoned his experiments here, but the marquis Ducrest, who was present at the exhibition, was favorably impressed with the practicability of moving boats by the steam engine.

FITCH'S STEAM BOAT, 1788.

In 1775, John Fitch, an obscure and unlettered American mechanic, conceived the project of a steamboat. A similar thought had also occurred to a Mr. Henry, of Lancaster, Pa.; and in 1778 the well-known Thomas Paine had mentioned a similar project to Andrew Elicott, famous for his ingenuity. Some of these, and particularly Fitch, were entirely ignorant that any thing of the kind had ever been thought of by any one else. In 1788 Fitch applied for and obtained a patent for the application of steam to navigation. He had previously made a model of his contrivance and showed it to Gen. Washington, who then recollected that a Mr. Rumsey of Virginia had mentioned the same subject to him in conversation in the winter of 1784. But Fitch alleges that the model then exhibited by Rumsey, was a boat to stem the current of rapid rivers, by means of wheels, cranks and poles; a contrivance which Fitch says had been tried many years before either his or Rumsey's had been thought of, on the Schuylkill, by a farmer near Reading, and failed. Fitch claims to have made an experiment in 1783, on the Delaware, and succeeded in moving about by paddles which derived their motion from a steam engine. Both Fitch and Rumsey were supported by associations of wealthy persons, who advanced money to make partial experiments, and to assist in taking out patents in England. It appears that in 1786, Rumsey, having procured a patent in Maryland, made a trial with his boat, and succeeded in propelling it by steam alone, *against the current of the Potomac at the rate of four or five miles an hour!* His boat was about fifty feet in length, and was propelled by a pump worked by steam, which propelled a quantity of water up through the keel, and forced it out at the stern, through a horizontal trunk in her bottom. The reaction of the effluent water carried her at the above rate, when loaded with three tons, in addition to the weight of her engine, about a third of a ton. The boiler held no more than five gallons, and needed only a pint of water at a time; and the whole machinery did not occupy a space greater than that required for four barrels of flour. The fuel consumed was about equal to four or six bushels in twelve hours. Rumsey had another project, which was to apply the power to long poles, which by that means push a boat against a rapid current. The celebrated Dr. Rush was a warm friend of Rumsey, and advocated his interest in England.

It was not till 1788 that Fitch got ready to make his experiment. In that year his boat was launched in the Delaware. The above engraving will give some idea of it, which will be further illustrated by the description given by Fitch himself, as follows:

"The cylinder is to be horizontal, and the steam to work with equal force at each end. The mode by which we obtain a vacuum is, it is believed, entirely new, as is also the method of letting the water into it and throwing it off against the atmosphere without any friction. It is expected that the cylinder, which is of twelve inches diameter, will move a clear force of eleven or twelve cwt. after the frictions are deducted; this force is to be directed against a wheel eighteen inches in diameter. The piston is to move about three feet, and each vibration of it gives the axis about forty evolutions. Each evolution of the axis moves twelve oars or paddles five and a half feet; they work perpendicularly, and are represented by the strokes of a paddle of a canoe. As six of the paddles are raised from the water, six more are entered, and the two sets of paddles make their strokes of about eleven feet in each evolution. The crank of the axis acts upon the paddles, about one third of their length from their lower ends, on which part of the oar the whole force of the axis is applied. The engine is placed in the bottom of the boat, about one third from the stern, and both the action and reaction turn the wheel the same way."

The boat performed her trip to Burlington, a distance of twenty miles; but unfortunately burst her boiler in rounding to the wharf. He procured another boiler, and performed another trip from Trenton to Burlington and back in the same day. She moved at the rate of *eight miles an hour*, but some parts of the machinery was continually breaking, and the unhappy projector only conquered one difficulty to encounter another. Perhaps this was not owing to any defect in his plans, but to the low state of the arts at that time, and the difficulty of getting such complex machinery made with proper exactness. Both these Americans, and indeed most of the European experimenters, labored under the disadvantage of imperfect models to make their experiments with; their machines being the productions of inexperienced workmen, laboring with improper and inefficient instruments. Little else than failure could be anticipated of the best conceived engines, under such circumstances.

THE METALS—No. III.

Silver, as well as gold, was long distinguished as one of the perfect metals, but all distinctions between perfect and imperfect metals, as between metals and semi metals, are now laid aside as unnecessary and improper.

Silver is a metal of a fine white color, without taste or smell, and too well known to need a particular

description. It is softer than copper, but harder than gold, and in brilliancy is exceeded only by polished steel. Its specific gravity is 10.47, and melts at 1,000 Fahrenheit. In malleability it is inferior to none of the metals, and can be beaten into leaves only one one-hundred thousandth of an inch in thickness. Its ductility is equally remarkable; it may be drawn out into wire, much finer than a human hair, so fine, indeed, that a single grain of silver may be extended over four hundred feet in length. Its tenacity is such that a wire seventy-eight one thousandths of an inch in diameter will support a weight of one hundred and eighty-seven pounds avordupois, without breaking.

Silver is found in many parts of the world, particularly in Peru and Mexico; in Saxony, Bohemia, Suabia, and Hungary; in Norway, Russia, and Siberia. It occurs in a metallic state, as a salt and oxide, and a considerable quantity has been obtained from the lead mines of Great Britain and Ireland. Silver in ore, or other of the various forms in which it occurs, is much more widely disseminated than gold. It has been remarked that the warmer regions of the globe afford the greatest quantity of gold, and that the richest repositories of silver are in high latitudes, or in elevated regions. Thus the most celebrated silver mines in Europe are in Sweden and Norway, at no great distance from the polar regions. Those mines in warmer regions are almost all situated near the summits of Alpine mountains commonly covered with snow. Those of Central America are situated amidst perpetual snow, and are worked at a great expense of human life. It is often found in a native metallic state, sometimes in masses of very considerable weight. Jameson mentions that at Schneeberg in Saxony, in 1478, a rich vein was discovered, and a mass of native silver extracted, which, when melted, produced 40,000 lbs. Besides this it occurs in many different forms, which require as many different methods of treatment. Mexico is richest in mines of silver of any portion of the globe, and alone has above three thousand mines or excavations for silver ores, which have produced annually, for many years, over $4,000,000. In Peru the annual produce of this metal was formerly over $2,000,000. Buenos Ayres contains the celebrated mines of Potosi, discovered in 1545, which Humboldt estimates to have produced since their discovery the enormous amount of $1,150,000,000. The most celebrated mine of Europe, since it was opened, and it is now nearly exhausted, is estimated to have produced only about $20,000,000. The annual produce of all the mines in the world is now estimated at about $20,000,000 per annum.

Silver is not oxydized by exposure to the atmosphere, and the heat of common furnaces is insufficient to affect it, but a powerful solar lens will vitrify it in the same manner as gold, converting it into a species of glass. Garto Claveus kept an ounce of silver melted in a glass house furnace for two months, and it was found to have lost nearly one twelfth of its weight. But when heated under the flame of a compound blow pipe it volatalizes rapidly, passing off in a visible smoke.

Nitric acid, slightly diluted, dissolves it with the greatest rapidity, emitting nitrous gas in great quantities, and forms nitrate of silver, or, as it is probably better known to our readers, *lunar caustic*.

The uses of silver are well known; it is chiefly applied to the forming of various utensils for domestic use, and as the medium of exchange in money. Its softness is the principal objection to its use in the manufacture of astronomical and other instruments, and for this reason when employed as coin it is alloyed with other inferior metals, to render it of proper hardness. Thus the standard coin of Great Britain is composed of twelve and one-third parts silver to one of copper; that of this country contains a greater quantity of alloy.

The consumption of silver is very great, immense quantities being annually manufactured into plate, or used in the arts. All things considered, *intrinsically* it is more valuable than gold, but less so than *iron*, the most useful of all metals, and of which we shall speak at length in our next.

FRANKLIN'S ESSAYS.

In reviving the essays of Benjamin Franklin, no apology is necessary, we trust, for their threadbare use. They were once the gems in our school books, and were republished in all forms. But modern refinement has excluded all such oldfashioned notions, and they have become obsolete. There are few of us who have not had occasion to regret some expenditure which has brought with it pain or chagrin, and we may take a few lessons of the practical old philosopher with pleasure and profit.

THE WHISTLE.

When I was a child, at seven years old, my friends on a holiday filled my little pockets with coppers. I went directly to a shop where they sold toys for children; and being charmed with the sound of a whistle, which I met by the way, in the hands of another boy, I voluntarily offered and gave all my money for one.

I then came home, and went whistling all over the house, much pleased with my whistle; but disturbing all the family. My brothers and sisters, and cousins, understanding the bargin I had made, told me I had given four times as much for it as it was worth.

This put me in mind of what good things I might have bought with the rest of the money. And they laughed at me so much for my folly, that I cried with vexation; and the reflection gave me more chargrin than the whistle gave me pleasure.

This, however, was afterwards of use to me; the impression continuing on my mind, so that often when I was tempted to buy some unnecessary thing, I said to myself, *Don't give to much for the whistle.* And so I saved my money.

As I grew up and came into the world, and observed the actions of men, I thought I met with many, very many, *who gave to much for the Whistle.*

When I saw any one too ambitious of court favours, sacrificing his time in attendance at levees, his repose, his liberty, his virtue, and perhaps his friends, to attain it, I have said to myself, *This man gives too much for his Whistle.*

When I saw another fond of popularity, constantly employing himself in political bustles, neglecting his own affairs, and ruining them by the neglect, *He pays indeed,* said I, *too much for his Whistle.*

If I knew a miser, who gave up every kind of comfortable living, all the pleasures of doing good to others, all the esteem of his fellow-citizens, and the joys of benevolent friendship, for the sake of accumulating wealth, *Poor man,* said I, *you do indeed pay too much for the Whistle.*

When I meet with a man of pleasure, sacrificing every laudable improvement of the mind or of his fortune, to mere corporal sensations, and ruining his health in the pursuit; Mistaken man, say I, you are providing pain for yourself instead of pleasure; *you give too much for your Whistle.*

If I see one fond of fine clothes fine furniture, fine houses, fine equipage, all above his fortune, for which he contracts debts, and ends his career in prison; Alas! say I, *he has paid dear, very dear for his Whistle.*

In short, I conceived that great part of the miseries of mankind were brought upon them by the false estimates they had made of the value of things, and by their giving too much for their *Whistles.*

ADVICE TO A YOUNG TRADESMAN.

Remember that time is money. He who can earn ten shillings a day by his labour, and goes abroad, or sits idle one half of that day, though he spend but sixpence during his diversion or idleness, ought not to reckon *that* the only expense; he has really spent or rather thrown away, five shillings besides.

Remember that credit is money. If a man lets his money lie in my hands after it is due, he gives me the interest, or so much as I can make of it during that time. This amounts to a considerable sum where a man has good and large credit, and makes good use of it.

Remember that money is of a prolific, generating nature. Money can beget money, and its offspring can beget more, and so on. Five shillings turned is six; turned again, it is seven and three pence; and so on till it becomes a hundred pounds. The more there is of it, the more it produces every turning, so that the profits rise quicker and quicker.

Remember that six pounds a year is but a groat a day. For this little sum (which may be daily wasted either in time or expense, unperceived) a man of credit may, on his own security, have the constant possession and use of a hundred pounds. So much in stock, briskly turned by an industrious man, produces great advantage.

Remember this saying, "The good paymaster is lord of another man's purse." He who is known to pay punctually and exactly at the time he promises, may at any time and on any occasion, raise all the money his friends can spare. This is sometimes of great use.

After industry and frugality, nothing contributes more to the raising of a young man in the world, than punctuality and justice in all his dealings; therefore never keep borrowed money an hour beyond the time you promised, lest a disappointment shut up your friend's purse forever.

The most trifling actions which affect a man's credit are to be regarded. The sound of your hammer at five in the morning, or nine at night, heard by a creditor, makes him easy six months longer.

But if he sees you at a billiard table, or hears your voice at a tavern, when you should be at work, he sends for his money the next day; demands it before he can receive it in a lump.

It shows, besides, that you are mindful of what you owe; it makes you appear a careful, as well as an honest man, and that still increases your credit.

Beware of thinking all your own that you possess, and of living accordingly. It is a mistake that many people who have credit fall into. To prevent this, keep an exact account, for some time, both of your expenses and your income.

If you take the pains at first to mention particulars, it will have this good effect; you will discover how wonderful small, trifling expenses mount up to large sums, and will discern what might have been, and may for the future be saved, without occasioning any great inconvenience.

In short the way to wealth, if you desire it, is as plain as the way to market. It depends chiefly on two words, *industry* and *frugality;* that is, neither time nor money, but make the best use of both. Without industry and frugality, nothing will do, and with them, every thing will do.

He who gets all he can honestly, and saves all he gets (necessary expenses excepted) will certainly become *rich*; if that Being, who governs the world to whom all should look for a blessing on their honest endeavours, doth not, in his wise providence, otherwise determine.

MANUFACTURING DISTRICTS.

CLINTONVILLE,

Village and postoffice, Au Sable, Clinton county, is situated on the north side of the Au Sable river, 6 miles above Keeseville, and 10 miles west of Point Kent, on Lake Champlain. It was incorporated in 1825, and now contains about 750 inhabitants, 100 dwelling houses, 1 Presbyterian, and 1 Methodist church; 1 tavern, and 8 stores and groceries. The Peru Iron Company here have a large and extensive manufacturing establishment. The company is chartered with a capital of $200,000, of which $120,000 is paid in. Their works consist of a forge of 18 fires, where they manufacture 1,600 tons of iron annually; the ore being principally obtained in the vicinity, from the Arnold and Palmer mines, which are situated from 3 to 5 miles from this place. A rolling mill in which is rolled annually about 1,800 tons market iron and nail plate; they have also a nail factory, in which is manufactured 1,200 tons nails per annum. A chain cable factory, a pocket furnace, a machine shop, a grist mill and saw mill, all belong to this establishment, giving employment to about 150 mechanics and laborers. The *Arnold Hill Mine,* as it is called, in which is found the finest quality of iron ore, may be described as one of the many localities of iron that exist in this vicinity. "On this hill there are four veins running parallel or side by side; their width varies 3 to 11 feet. One of these, the *old blue vein,* has been worked to the depth of 200 feet, and in length 100 rods. Throughout this extent, it preserves an uniformity of width, which is on an average 4 or 5 feet; in some portions of the vein it is only 2, in others 8 feet. It dips to the west at an angle of about 75°; it has regular side walls, though less perfect on the west side than on the east."—*Disturnell's Gazetteer.*

COHOES,

Village and postoffice, Watervliet, Albany county, is situated on the south-west bank of the Mohawk river, a short distance below the Cohoes Falls and near the junction of the Erie and Champlain canals. Here is afforded by means of the Mohawk, an immense amount of hydraulic power; if found necessary the whole volume of water in the river can be used for propelling machinery to almost any extent, having a total fall of about 140 feet. During the lowest stages of water, it is estimated that there is sufficient to propel at least 1,000,000 of spindles with all the necessary apparatus. Here is now erected an extensive cotton factory, owned by "The Harmony Company," calculated for 7,000 spindles and 220 looms; a large axe and edge tool manufactory; a manufactory of drawers, wrappers and hosiery, the knitting frames being driven by waterpower; 2 machine shops; 1 iron and brass foundery, 1 paint mill, 1 flouring mill, and 3 saw mills, two of which are employed in sawing veneers for cabinet work; 200d welling houses, 1 Presbyterian, 1 Episcopal, 1 Baptist, 1 Methodist, 1 Dutch Reformed and 1 Universalist church, 1 hotel and 12 stores; containing a population of about 2,000 inhabitants, mostly engaged in the above manufactories. The peculiar advantages of this place for hydraulic purposes was first fully appreciated by the late celebrated civil engineer Canvass White, Esq., during the progress of cutting the Erie canal, on which great work he was engaged. With the co-operation of sundry individuals, a liberal charter was obtained by a company. from the legislature of the state, with a capital of $250,000, for the purpose of improvement on a large scale, commensurate with its natural advantages, but by reason of continued enlargement of its plan, the capital was subsequently increased to $500,000. Stages pass through this village several times daily, running between Albany and Waterford, a distance of 10 miles.—*Ib.*

POUGHKEEPSIE,

Village and postoffice, Poughkeepsie, Dutchess county, is handsomely situated on the east side of the Hudson river, about equi-distant between the cities of New York and Albany. It was incorporated in 1801, and now contains about 7,500 inhabitants, mostly engaged in mercantile and manufacturing pursuits; 1000 dwelling houses, many of them tasty edifices; a court house and jail and county poor house; a splendid collegiate building; the Dutchess academy; 2 female seminaries, besides several select schools; a lyceum and reading room; 2 public markets; 1 Presbyterian, 1 Congregational, 2 Episcopal, 1 Baptist, 2 Methodist, 1 Dutch Reformed, 1 Universalist, 1 Roman Catholic, and 1 African church and 2 Friend's meeting houses; 3 banking houses and a saving's institution; an incorporated company for the growth and manufacture of silk, who have erected extensive buildings for the manufacture thereof; an incorporated company for the manufacture of locomotive engines and railroad machinery, having already erected large buildings, not surpassed by any in the state; an incorporated company called the "Dutchess Whaling Company." who own 5 ships engaged in the whale trade; 10 hotels and taverns; 25 dry good stores, 50 groceries, 4 drug stores, 2 bookstores, besides a large number of other different kind of stores and shops; 2 breweries, one of which is very extensive, perhaps the largest in the states, being capable of making 30,000 barrels of beer annually; 2 carpet factories, 3 flouring mills, 3 plaster mills, 2 saw mills, 1 dye-wood mill, 2 turning and sawing establishments, 3 sash and blind factories, 3 brick yards, where are manufactured the finest kind of bricks in large quantities, 1 sperm oil and candle factory, 2 soap and candle factories, 3 pump factories, 2 pin factories, one of which is very extensive, 2 brass foundries, 2 gun factories, 3 iron founderies, 2 stone and earthen ware factories, 3 machine shops, 2 tanneries, 3 plough factories, 1 paper hanging establishment, 3 tobacco and segar factories, 9 carriage and wagon manufactories, 1 rope walk, 1 hay press, 6 lumber yards, 2 ship yards, 5 coal yards, and 2 marble yards; 3 printing offices and 1 bindery, besides most every other kind of mechanic work shops. In addition to the above whale ships, here are owned 3 steamboats, 3 freight barges, and 8 sloops, engaged in transporting produce and merchandise to and from the New York market, and other places on the river. No place on the Hudson, exceeds this village for beauty of location and pre-eminence in refinement and wealth of its inhabitants; surrounded as it is, by one of the richest agricultural districts in the Union, it may justly be ranked as the queen of villages in the empire state. The Poughkeepsie collegiate school, situated on *College Hill*, about half a mile northeast of the compact part of the village, is unrivalled in its location commanding an extensive prospect of the river and surrounding country, which cannot fail to excite the admiration of every lover of picturesque scenery; in addition to the collegiate building, which is a splendid edifice, here has recently been erected an extensive gymnasium. This is a well established and flourishing institution, conducted on philosophical principals. Poughkeepsie, is a corruption of the Indian word *Apokeepsing*, signifying *safe harbor*. It was early settled, and in 1788 the state convention met here to ratify the federal constitution of the United States; previous to that date the state legislature frequently convened in this village, which has long been considered a favorite place of residence.—*Ib.*

SYNOPSIS OF LAW.

MASTER AND SERVANT.

There exists now in this state no slavery, or domestic servitude. The only mode in which this domestic relation can now originate is by the contract of hiring and by apprenticeship.

In the first, the one is bound to perform the service, and the other to pay the stipulation consideration for it.

The master is bound by his servants' acts when done under the authority of the master.

Any injury fraudulently done by the servant while in the immediate employment of his master, renders both or either, liable in damages. So also if the injury proceed from negligence or want of skill in the servant.—2 *Kent's Com.* 209; 1 *Black.* 431.

But the master is only answerable for the fraud of his servant, while he is acting in his business, and not for fraudulent or tortious acts, or misconduct in those things which do not concern his duty to his master, and which, when he commits he steps out of the course of the service.—8 *Term Rep.* 533; 17 *Mass. Rep.* 508, 510.

If the servant employs another servant to do his business, and in doing it the servant so employed is guilty of an injury, the master is liable.—1 *Bos. & Pul.* 404.

A servant may justify an assault and battery in the necessary defence of his master. Whether the master can in that of his servant not distinctly settled. See 2 *Kent's Com.* 211, *1st ed.*

A master may bring an action for beating and maiming his servant, and recover for the loss of his service.

If a servant leave the master's employment and go into that of another, having notice of the previous contract, the first master has his remedy against both the servant and his employer, otherwise if he had no notice, unless he refuse to restore him upon information and demand.—1 *Black. Com.* 429.

Whatever a servant is premitted to do in the usual course of business is equivalent to a command, and binds the master.

A wife, a friend, a relation, accustomed to transact business for a man, are, as to that, his servants and the principal must answer for their conduct.—1 *Black. Com.* 430.

If a master usually deal with a tradesman himself, or constantly pay him ready money, he is not answerable for what his servant takes up upon trust; for there is no implied order; but if he usually send him upon trust, or sometimes on trust and sometimes with ready money, he is answerable for all he takes up.

Where a servant enters into a contract and performs part, and then, without cause, and without the agreement or fault of the master, of his own mere volition, abandones the performance, he cannot recover for what he has done. (See this principle asserted in 8 *Cow.* 63; 12 *J. R.* 165 & 13 *J. R* 94.) And yet some doubt may now be entertained whether he would not be premitted to recover for the part performed the other party having a right to have deducted what damages he has sustained in consequence of the non performance of the entire undertaking.

APPRENTICE.

A very extensive class of servants are the *apprentices*, who are bound to service for a term of years, to learn some profession or trade.

This is regulated by statute.

Every male infant and unmarried female under eighteen years of age, may bind himself or herself to any trade or employment; if a male until the age of twenty-one if a female, until the age of eighteen.

The consent to such contract is reqnired to be given,

1. By the father of the infant If he be dead or be not in a legal capacity to give his consent, or shall have abandoned and neglected to provide for his family, and such fact be certified by a justice of the peace of the town, and endorsed on the indenture, then, 2. By the mother. If the mother be dead, or be not in a legal capacity to give such consent, or refuse, then, 3. By the guardian of such infant duly appointed. If such infant have no parent living, or none in a legal capacity to give consent, and there be no guardian, then, 4. By the overseer of the poor, or any two justices of the peace, of the town, or any judge of the county courts of the county, where such infant shall reside.—2 *R. S.* 154 & 155, § 1 & 2.

Such consent must be signified in writing, by a certificate at the end of, or indorsed upon the indentures of apprenticeship.—§ 3.

The provisions of the statute above given must be strictly complied with or the indentures will be void.

The indentures are required by statute to contain, 1. The age of the infant bound.—§ 8. 2. The sum of money paid or agreed for with or in relation to the binding out.—§ 9. 3. Where a child is bound out by the county superintendents of, or overseers of the poor, the person to whom he is bound, shall agree in the indentures, to cause such child to be instructed to read and write, and, if a male, in the general rules of arithmetic, and that at the expiration of the term of service he shall give him or her a new Bible.—§ 10.

No indentures made otherwise than as described are valid.—2 *R. S.* 155, § 26.

The indentures, in other respects, are to be construed like other contracts. They should embody all the essential agreements and stipulations between the parties.

The statues point out a mode of compelling the performance, and of punishing neglects of duty.—1 *R. S.* 159.

The master is entitled to the wages and fruit of the personal labour of the apprentice, while the relationship continues, and the apprentice is in his service.

Where an apprentice is employed by a third person, without the knowledge of the master, the master is entitled to his earnings, whether the employer did or did not know that he was an apprentice.—*John. Rep.* 274.

If in an indenture, it be stated, that the apprentice binds himself, with the consent of the father, and the father sign the indenture, he is bound for the performance of the covenants on the part of the apprentice. —18. *John. Rep.* 99.

AN EXPERIMENT.

I once knew a boy who was employed by his father to remove all the loose small stones which, from the peculiar nature of the ground, had accumulated in the road before the house. He was to take them up and throw them over into the pasture across the way. He soon got tired of picking them up one by one, and sat down upon the bank to try to devise some better means of accomplishing his work; he at length conceived and adopted the following plan:—He set up in the pasture a narrow board for a target, or, as boys would call it, a mark, and then collecting all the boys in the neighbourhood, he proposed to them an amusement, which boys are always ready for, firing at a mark. I need not say that the stores of ammunition in the street were soon exhausted, the boys working for their leader when they supposed they were only finding amusement for themselves. Here now is experimenting upon the mind: the production of useful effect with rapidity and ease, by the intervention of proper instrumentality; the conversion, by means of a little knowledge of human nature, of that which would have otherwise been dull and fatiguing labour, into a most animating sport, giving pleasure to twenty instead of tedious labour to one.—*Abbott's Teacher.*

BENZOIN. A species of resin used chiefly in perfumery. It is extracted by incision from the trunk and branches of the *styrax benzoin*, which grows in Java, Sumatra, Santa Fé, and in the kingdom of Siam. The plant belongs to the decandria monogynia of Linnæus, and the natural family of the ebenaceæ. It hardens readily in the air, and comes to us in brittle masses, whose fracture presents a mixture of red, brown, and white grain of various sizes, which, when white, of a certain shape, have been called *amygdaloi* their resemblance to almonds. The *sorte* is, on the other hand, very impure.—*Ur*

EMINENT MECHANICS AND ARTISTS.

JOHN FITCH

Was born in the year 1743, at East Hartford, Ct. His father was a farmer in good circumstances, who turned the labor of his children to the best account. He went to school at the age of four, and considering the disadvantages of his situation, made an uncommon proficiency in the rudiments of learning. At the age of eight he was transferred from the school to the farm, and put to labor much beyond his strength and years. He continued his studies without a tutor, at all leisure moments, with such books as fell in his way, which were few and imperfect enough. He had access to an arithmetic which went as far alligation alternate, which he became perfect master of, and at the age of eleven, he says, heard of a book that would give him a knowledge of the *whole world*. It was *Salmon's Geography*. His father refusing to procure it for him, he made him proposals for some poor ground at the end of a field to plant potatoes, which he planted on a holiday, and cultivated at noontimes and evenings. The product, after paying back his father the seed, was ten shillings, and the book was procured from New York in about a year's time, by a merchant who dealt at that distant port. In addition to his geography, he studied surveying, which was afterwards of more service to him, pecuniarily, than any other pursuit which he seems to have adopted.

At the age of seventeen he was anxious to learn some trade or go to sea, and expressed these views to his father, at the same time representing that he was too small and weak to obtain a living on the farm. Having got his father's consent, he engaged a berth for a short voyage to settle his opinion as to the propriety of learning a trade or becoming a seaman.

A place was first engaged on board of a sloop bound to New York, under one Captain Abbott. This situation was found very disagreeable. The master treated him with brutality; and although there were plenty of empty berths, he was compelled by the mate Starr, to lie upon deck in a chest, much too short, and this, too, without covering. Such usage was considered extremely hard, after having been used to a comfortable bed at home.

An occasion offering a day or two subsequent, he left and went on board of a Providence sloop. Here things were found very comfortable, and although not in accordance to stipulation, Fitch evinced such zeal and industry that his master paid him wages, and he made a "saving voyage." "I returned home," says he, "neither enamoured with the sea nor resolved against it, and in as much of a quandary how to dispose of myself as ever."

He soon after apprenticed himself to a clock maker, under stipulation to work seven months of the year in the out-door concerns of his employer, and to pursue the arts, and mysteries of wooden clock-making the remainder of the time. The clockmaker failed to initiate his apprentice in the trade as he agreed, but kept him almost wholly employed in other affairs. At the expiration of too years he abandoned his employer, and sought to complete his trade with another who united to the making of clocks, the repairing of watches. But his new employer sought also to prevent his obtaining any knowledge of the business, and starved him besides. He finally disengaged himself from this connection, and found employment as a journeyman at brass work; which he pursued with so much industry, that at the end of two years he found himself in the possession of fifty pounds. He soon after engaged in the manufacture of potash, which proved an unlucky enterprise, owing to some difficulty with his partner. He had also in the meantime formed a matrimonial alliance, which was equally unfortunate with his other speculations, and which he was induced to annul for mutual benefit.

On forsaking the place of his nativity, Fitch went to Pittsfield, Mass., but not having constant employment there, visited Albany, yet with no better success. A short time after, we find him in New Jersey; in a destitute condition, endeavoring to find employment on some farm as a common laborer, but his sickly appearance baffled all his efforts,—no one would employ him. Finally, he entered into the business of making buttons, which he pursued with tolerable success, first at New Brunswick, and afterwards at Trenton.

At the commencement of the revolution, Fitch espoused the popular cause, and during a portion of the time rendered himself very useful in reparing arms for the continental army. Subsequently he removed to Kentucky, where he received the appointment and practised as a surveyor. While at the West, and in navigating a river in a small boat, Fitch and his companions were taken prisoners and carried into captivity by the Indians, but after considerable hardship and suffering, were released. At a subsequent period he became once more an inhabitant of one of the Atlantic states.

"In the month of April, 1785, says Fitch, "I was so unfortunate as to have an idea that a carriage might be carried by the force of steam along the roads. I pursued that idea about one week, and gave it over as impracticable, or, in other words, turned my thoughts to vessels. From that time I have pursued the idea to this day with unremitted assiduity, yet do frankly confess that it has been the most imprudent scheme that ever I engaged in. The perplexities and embarrassments through which it has caused me to wade, far exceed any thing that the common course of life ever presented to my view; and to reflect on the disproportion of a man of my abilities to such a task, I am to charge myself with having been deranged; and had I not the most convincing proofs on the contrary, should most certainly suppose myself to have been *non compos mentis* at the time."

A few years before his death, Fitch deposited with the Franklin Library of Philadelphia, three manuscript volumes with directions that they should not be unsealed until thirty years after his decease. On opening them at the expiration of that term, they proved to be his autobiography, and an account of his experiments upon the steam engine. These manuscripts have preserved his name and his experiments from oblivion, and detail his attempts, difficulties, successes and failures, in a style peculiar to himself, and at once interesting and quaint. From these a sketch of him has been compiled for the *Memoirs of Eminent Mechanics*, to which we have before alluded, and one British writer on the steam engine has given a notice of his boat, derived from the same source. No other biographers seem to have had any knowledge of him. In his autobiography, speaking of the originality of his inventions, he says: "What I am now to inform you of I know will not be to my credit, but so long as it is the truth I will insert it, namely, that I did not know that there was a steam engine on earth, when I proposed to gain a force by steam; and I leave my first drafts and descriptions behind, that you may judge whether I am sincere or not. A short time after drawing my first draft for a boat, I was amazingly chagrined to find, at parson Irwin's, in Bucks county, a drawing of a steam engine; but it had the effect to establish me in my other principles, as my doubts lay at that time in the engine only."

Dr. Thornton, some time since in the patent office at Washington, in *A Short Account of the Origin of Steam Boats*, corroborates many of Fitch's statements and gives a circumstantial account of his experiments and operations. It appears that Fitch obtained a patent for his invention in 1788, and found some who had faith enough in his projects to form a company with a view to carry them into effect. They soon found a rival in Mr. James Rumsey of Maryland, who, conceiving that he had made some discoveries in the same line, applied for a patent. He was assisted by some wealthy and influential friends, among whom was the celebrated Dr. Rush, of Philadelphia. A controversy arose between the two companies, which was carried before the legislature, and finally decided in Fitch's favor.

Having obtained an exclusive patent for the application of steam as an agent to the propelling powers, they now wrought incessantly at the boat to bring it to perfection. Under the disadvantages of never having seen a steam engine, and of not having a single engineer in their company or pay, they were compelled to make engineers of common blacksmiths, and after expending many thousand dollars their boat did not exceed three miles an hour. This not proving satisfactory, another effort was made to attain the speed of eight miles an hour; and at the end of another twelve months they were ready for the experiment. The trial was made before witnesses, in the river at Philadelphia, the experiment declared to be fairly made, and the boat was found to go at the rate of *eight miles an hour!* It afterwards went eighty miles in a day. But he had become embarrassed with debt, and, after having satisfied himself of the practicability of the invention, was obliged to abandon it.

Mr. Fitch was afterwards sent to France by the company, by the request of the American consul at L'Orient, who, being one of the company, was solicitous to have steam boats built in France; but he returned without making the attempt. And the company, after interfering with his views, and attempting various plans of improvement which failed of success; and being probably influenced by that unceasing ridicule cast upon the project, one by one gradually withdrew from the concern. The conviction of Fitch, however, respecting the power of steam continued firm, and in 1792, when the boat was laid up, in a letter to Mr. Rittenhouse, one of the stockholders, he says, "It would be much easier to carry a first rate man-of-war by steam than a boat, as we would not be cramped for room, nor would the weight of machinery be felt. *This, sir, will be the mode of crossing the Atlantic in time*, whether I bring it to perfection or not, for packets and armed vessels. I mean to use the wind when we have it, and in a calm to pursue the voyage at the rate of seven or eight miles an hour."

His enthusiasm on the subject of steam never diminished one moment; it was the constant theme of his discourse whenever he could prevail upon any one to listen to him. On one of these occasions he was heard to say: "Well, gentlemen, although I shall not live to see the time, you will, when steam boats will be preferred to all other modes of conveyance, and especially for passengers; and they will be particularly useful in the navigation of the Mississippi." It was only left for him to talk; he had not the means to act. For two or three years he was indebted to the charity of a friend for a home. In 1796 he went to Kentucky to recover some land he had bought there many years previous; and just as a better day seemed dawning upon the career of this most singularly unfortunate man, he was seized with the fever, and died. In conformity to his wishes, he was buried on the shore of the Ohio, that he might repose "*where the song of the boatmen would enliven the stillness of his resting place, and the music of the steam engine soothe his spirit!* What an idea! yet how natural to the mind of an ardent projector, who had been so long devoted to one darling object, which it was not *his* destiny to accomplish. And how touching is the sentiment found in his journal:—"The day will come when some more powerful man will get fame and riches by my invention, but nobody will believe that *poor John Fitch can do any thing worthy of attention!*"

ALBANY, SATURDAY, APRIL 23, 1842.

JOHN FITCH.

On our biographical page will be found a brief sketch of the life of an ingenious American mechanic, who in an age and country presenting every difficulty calculated to frustrate such attempts, actually invented and put in operation a steam boat upon the Delaware river, nearly twenty years before Fulton succeeded in establishing steam navigation on the Hudson. Our space did not permit a detail of his experiments, embarrassments, and disappointments, which win for him the sympathy of those who have heart enough to mourn over the blighted prospects of genius. A diagram of his boat will be found on a previous page. With all his merits, he has narrowly escaped utter oblivion.

A PROFOUND CRITIC.

The editor of the Buffalo American is certainly a man of vast perception and immense acuteness, besides being a very just and *honorable* man. He takes editorial articles from our columns, by which we feel much, very much flattered, but he *always forgets* to give us credit, and hence, we repeat, he is a very *just* man. He talks, too, of the law, and sail craft, and root culture, and anon, he pounces like an eagle from his eyere upon Bulwer, and his last and best work, Zanoni. Poor Bulwer, how we pity him! With what stinging severity is he criticised—how the poor fellow must writhe under the lash of the redoubtable critic of the Buffalo American! Look well to thy laurels, oh master spirit of the world of Fancy!—for lo! there ariseth a cloud, a shadow from the shores of the turbulent Erie! it will darken thy glory's sun, and hurl thee from the height where acclamation has placed thee! for, out of darkness thick and terrible, the Mystic stretcheth forth a sceptre, a pen of giant magnitude! He beckons thee, Bulwer—he warns thee to die! (see how the veil of inspiration mantles him!) thy works shall live no longer—the fiat hath gone forth—Fate hath spoken, HE of the Buffalo American hath said it!

THE CONVENTION.

The Convention of the Home League, which met in New York on the 5th inst., has adjourned. The proceedings and speeches, as well as the reports of the various committees there appointed, are fraught with interest. These have appeared in some of the public prints, and cannot fail to command attention. We have before us the "Address of the Home League to the People of the United States," occupying a closely printed pamphlet of sixteen pages, of which we shall strive at some future time to give a condensed abstract. The subject to which it relates is now attracting more attention in the public mind than any other, and, from its intrinsic importance, should claim the calm consideratian of every class of the American people. We cannot, for our own part, discover why the proceedings of this convention should be looked upon with suspicion. It was composed, as its journal shows, of many sound and influential men of both political parties; and though some ultra political papers have denounced the meeting in terms none of the mildest, yet we repose very little confidence in their motives, for principle, we believe, they have none. We deem that we should be better justified in doubting the motives of the majority of our newspapers—our rabid political newspapers especially—than the integrity of men whose honesty and fair reputation the upas breath of envy or detraction has never sullied. These men may err, indeed, and let him who has never erred cast the first stone against them. But, whatever may have been their motives, it is not for us to judge. The *principles*, the *truth* or *falsity* of their positions—these are legitimate points of discussion, and on these we can properly express our opinions. So, when we see argument met by abuse, and plain facts and proper conclusions met by an ill affected sneer, we are, certainly, disposed to regard the carping caviller with suspicion. We like impartiality, and esteem the most palpable error, if honestly entertained, as worthy of a respectful refutation; and when a subject involves such important consequences for good or for evil to this wide country, it is with grief that we note this shirking, this evasion and despicable carping at *motives*. We lament that on a subject involving the common weal, partisan feeling should endeavor to blind the understanding and mislead the steps of the people. It is a remarkable fact that every question involving any interest is no sooner broached than it is seized upon for partisan purposes, and to promote partisan ends. Many oppose or advocate a measure for no other reason than because the party do, and the party, by some mysterious influence, is esteemed infallible. Nor is this much-to-be-deprecated feeling confined to matters of great importance, but a division is now taken on grounds full as trivial as the origin of the two great parties that split the Lilliputian commonwealth, the "*Great and Little Egg-Enders.*"

Let these subjects be discussed with the attention they deserve, and, instead of insidious charges on individuals, let the arguments, if there be any, be combatted, and their truth or falsity attested. If they are sound, like gold from the fire, they will come out the purer, and if not, their fallacy will be shown. This is the only true test—let it be tried.

RHODE ISLAND.

This little state is in a high fever, and has assumed quite a belligerent aspect. War, battle and carnage have become familiar words, and an appeal to arms is talked of louder than in whispers. The origin of the rumpus was in the determination of sundry freemen to have the right of suffrage extended from its former limits, and the old charter of king Charles amended to suit the times. Under this charter has this little state been governed, without murmur or complaint, for the whole term of its existence, but some of its provisions, which, no doubt, were considered liberal enough at that time, have failed to satisfy any longer, and the consequence is that a new constitution has been demanded, which shall do away with the trammels on the elective franchise, in the shape of property qualifications, and place all male citizens of the proper age on an equal footing. This just demand, instead of being unanimously acceded to, was refused by the legislature of the state; but, nothing daunted, her intrepid freemen met in convention, framed a constitution and submitted it to the people, by whom it was adopted by a large majority. The legislature, frightened at this step, receded a little from their position, and offered to compromise the matter, conceding in part the demands of the people. But no half a loaf would satisfy them, and the consequence is that little Rhody is in a state nearly bordering on a civil war. The Governor has issued a proclamation calling upon the armed force of the state to prevent the new constitution going into effect, should its friends attempt it. What the result will be we cannot tell, yet we hope that the new organization will supersede the old, and the vile monument of barbarous times, (for these restrictions on the right of suffrage can be considered in no other light,) be done away with entirely, and the freemen of Rhode Island stand on an equality with their brethren in other states.

PRESERVATION OF TIMBER.

In the Rail Road Journal of the 15th inst. we find an article showing that Dr. Earle's process of preserving timber has been disproved by experiment. One fact is stated respecting the wooden pavement laid in S. Sixth street, Philadelphia, under the personal supervision of Dr. Earle, which shows conclusively that his process, like many others that have preceded it, amounts to nothing, and that the prepared pavement is rotting in holes, just as the unprepared pavement did in Chestnut street. It seems that conclusions as to the efficacy of the various processes that have been proposed have not been sufficiently tested, and have been adopted too hurriedly. No adequate judgment can be formed of the merits of any process for preserving timber by an experiment of *two* or *three years*. So signally has the Dr's. experiment failed that the authorities of Philadelphia have ordered the removal of the wooden blocks and the substitution of cubical stone blocks.

It seems, by the experiments of M. Boucherie, that complete protection from putrefaction can be attained but by the use of different agents than those employed by Dr. Earle. M. Boucherie tested the efficiency of the various agents employed for these purposes on the very alterable pulp of the beet. In its natural state it moulded in nine days. When mixed with one *decigramme* of corrosive sublimate, complete protection ensued. With *one gramme* pyrolignite of iron, with the same result. When mixed with *one and a half gramme* of sulphate of iron or sulphate of copper, corruption was retarded in the one case only *one day*, in the latter only *two days*. These two latter agents are the ones used by Dr. Earle. If this test is true, then the Dr's. plan is, to say the most, *next* to nothing.

POSTAGE.

A change in the rates of postage is contemplated in the outlines of a bill recently presented by the Post Master General to the Chairman of the Committee of the House of Representatives, on the Post Office, &c. The bill proposes that those letters paying six and a quarter cents, hereafter pay five cents; those paying twelve and a half, ten cents; and those paying eighteen and three quarters, be increased to twenty cents; and all way newspapers be subjected to a higher rate of post-

age. Another proposition is to regulate the postage on newspapers and periodicals according to the size. The postage on periodicals seems to have been fixed arbitrarily, and imposes a tax upon that class of readers which should be borne by those huge, gormandizing sheets that flood our country. The proposition, with regard to letters, seems to us to amount to nothing, for we must confess that we should prefer the postage to remain as it is, rather than be subjected to such a change. We have expressed our opinions on this subject before. We know not but the present Post Master General is capable of devising a proper change, but we doubt it.

LEGAL REFORM.

The subjoined memorial was presented to the legislature near the close of its last session, but from the lateness of the hour, no action was had upon it. It will speak for itself:

The undersigned, citizens of this state, do respectfully represent that chap. 5, tit. 1, sec. 1, of the Revised Statutes, in making provision for the election and appointment of certain public officers of the state, provided for the appointment of "so many counsellors, solicitors and attorneys as shall from time to time be licensed to practice by the several courts of law or equity in this state." This is the power given to the judges of the several courts to appoint an unlimited number of persons to the office of counsellors of them, the said judges, and this innumerable army of sharp practitioners are to be furnished with licenses to empower them, and only them, to commence and prosecute, for hire, suits in the said courts, and, as the case may be, exalt them to the dignity or sink them to the level of "public officers." A license is "an exorbitant liberty," a "contempt of legal and necessary restraint." The legislature itself has no such power as this, and hence can delegate no such power to the judges, nor the latter to the lawyers. If the lawyers are "public officers," let the public pay them for their services. For individuals to employ and pay them would be but to bribe them to be faithless to their duty of counselling the judges. To bribe the members of the legislature to charter or license rail road, banking, or other corporations, would not, in the judgment of the undersigned, be a more flagrant perversion of all justice and equity. Licenses to sell meat in the markets, and licenses to sell alcoholic liquids any where, and the general prohibitions which ever accompany them, are obnoxious to objections not less weighty. This latter class of licensed persons are not, indeed, "public officers," but why not make them such, and make it their duty to counsel the judges in relation to meats, drinks, new moons and holydays, and ghosts, types and shadows of gold and silver coin which licensed bank brokers employ to cheat the laboring classes of mankind out of the hard earned fruits of their industry. Their occupations would tend to qualify them in an eminent degree for giving such advice as the result of their own experience, and the undersigned can perceive no reasons for making "public officers" of the former class of licentiates, which do not apply with equal force to the latter. "Public officers" may, and sometimes do maintain, against the evidence of the senses of almost every person but themselves and their clients, that distilleries, as usually managed in large cities, are not nuisances, and that "tainted hams and tainted smoked beef are not unwholesome provisions, and do not affect the health of the persons who eat them."

The undersigned submit to the legislature of New York, the broad but plain proposition that the said legislature have no lawful or equitable power or right to grant licenses to either class of persons named, nor to any other person or persons for either or any of the purposes aforesaid, nor for any similar purpose, nor to create such standing armies and "swarms of [public] officers, to harrass our people and eat out their substance." If the pursuance of all or either of those callings be in itself just and right, the legislature have no just or lawful power to prohibit any citizen of the United States from following it. If, on the contrary, such pursuit be unjust, immoral, of dangerous tendency, if it render property, liberty or life insecure, the legislature have no more power to license it than they have to license the commission of the crimes of robbery, burglary, adultery, rape, and murder, the shocking details of which, in almost every newspaper we take up, seem to have astounded and horrified what little of moral sense was left in the community. The undersigned further represent, that although the laws acknowledge the right of individuals to appear in the courts and prosecute and defend their own actions, or pleas, in their own persons, yet that in many cases they are required to procure the certificate or affidavit of a counsellor of the court or be deprived of all remedy. No matter what actions or judgments may be against a man, no matter with what fraudulent intentions, nor by what fraudulent means they have been commenced or carried on, no matter what objections or scruples of conscience he may have to employing a "public officer," with a license, "an *exorbitant* liberty," a "contempt of legal and necessary restraint," no matter if he had not a dollar on earth, nor means nor credit to obtain it, he must yet procure, without money and without price, the certificate of a counsellor, after the examination of his case, or sink into his grave, with groundless judgments, fraudulently obtained, hanging over his good name forever.

Wherefore the undersigned citizens of New York earnestly and firmly remonstrate against the continuance of the said abuses, and demand that the legislature forthwith pass an act declaratory, that such enormities cease and determine, and that henceforth the citizens of the United States inhabiting the state of New York have liberty to depart and go thereof without day.

NEW YORK, *March* 26, 1842.

FOOD BEARING PLANTS.

V. FIG.

The fig tree is a native of Asia, but early introduced into Europe and Africa. It flourishes in Turkey, Greece, France, Spain, Italy, and on the southern coast of the Mediterranean. It has been cultivated from remote antiquity in the countries surrounding the Mediterranean, where it forms a principal article of food in many places, and a valuable article of exportation in a dried state. A thousand tons it is said, are annually imported into Great Britain alone. The fruit is grown with some success even in the southern parts of England.

The tree grows to the height of fifteen or twenty feet, with a trunk sometimes two feet in diameter, giving out a great number of twisted, pliant branches which are grayish and rough when young. The leaves are about the size of the hand. In the wild state the fig tree is a low, distorted shrub, bearing fruit destitute of any agreeable flavor; but by high cultivation it has been made to produce fruit of many varieties, differing in color and flavor. Several hundred varieties are cultivated in Europe, some of which are very excellent. The best come from Turkey, where they are packed in drums by Greek children, who place them in very nice order, and press them down with their bare heels! They are for the most part dried in ovens before packing, to preserve them. Those of Kalamata in the Morea are said to be the most luscious. In Spain, figs are chiefly exported from Andalusia and Valencia; but are more or less abundant in every province. Dried figs with barley bread are now the ordinary food of the lower orders in Greece and the Archipelago. The ancients procured a sort of wine from figs, by a method which is still in use in the Archipelago.

In the United States the fig is sparingly cultivated in the envious of Philadelphia, but does not succeed so well as father south.

All travellers in the woods of South America speak of the noble aspect of the fig tree, of their gigantic dimensions, and of the thick delightful shade cast by their leafy heads. These are indeed a species of fig tree, or rather of the genus *ficus*, the botanical name, of which there are numerous species. Of these is the *ficus sycamorus*, a large tree, the fruit of which is eaten in Egypt and the Levant. The wood is said to be incorruptible, which would seem to be proved, as the cases containing the Egyptian mummies are said to be made of this tree. The *ficus indica*, or banyan tree, has been celebrated from antiquity, from its letting its branches drop and take root, which in their turn become trunks and give out branches; a single tree thus forming a little forest, sufficient to shelter a regiment of cavalry, and used as a natural canopy for great public meetings. The *ficus elastica*, or caoutchouc tree, the juice of which yields the substance known as India rubber. This tree is a native of Nepaul in Hindostan, but has become common in the hothouses in England. It would probably succeed in the United States and become a valuable acquisition. The *ficus religiosa*, or pippul tree, common in every part of India as a shade tree, and held in superstitious veneration by the Hindoos. Silk worms prefer the leaves next to those of the mulberry; they are also used for tanning leather by the Arabs.

LIEBER.

INVENTIONS, DISCOVERIES, ETC.

RICE CEMENT.

This useful and elegant cement, which is beautifully white, and dries almost transparent, is made by mixing rice flour intimately with cold water, and then gently boiling it.

CHEMICAL LARD OIL.

The editor of the Louisville Advertiser states that he has taken occasion to use the above named article —and that he prefers it to the ordinary sperm oil at the same price. It gives a clear brilliant light, and deposites none of the gummy matter that is found in most qualities of sperm.

It is sold in Louisville at about half the price of sperm oil, viz: at 75 cents by the single gallon, and much lower by the quantity.

This is the description of oil—the manufacture of which out of hog's lard and the important consequences flowing from success in manufacturing which upon the interests of the West, were explained in a long article in the Gazette some weeks since.

We learn that, in this city, some persons have commenced the manufacture, with what success we have not heard, but have little doubt that it can be introduced among us as a regular business.

Converting corn into spirit gas (instead of whiskey) and hogs into sperm oil is a happy device for the West. It will save us thousands of dollars in money, while the gain to health, comfort and respectability, will be fully attested by every true WASHINGTONIAN. —*St. Louis Gazette.*

NAVIGATING THE AIR.

Mr. John Pennington, of Baltimore, has sent a memorial to Congress, stating that he had discovered the means of navigating the air, and asking the aid of the general government to construct the necessary machine. Mr. Kerr of Md., in presenting the memorial, said he thought the machine a useful one, and in the event of war, will afford a safe and efficient means of reconnoitering the enemy.

FIRST MANUFACTORY IN NEW ENGLAND.

Adrian Vander Donck, in his description of the New Netherlands, written previous to the year 1656, says: "The people of New England already cast their own cannon, plates, and cannon balls, from native iron." The iron was probably the "bog iron," and this the commencement of the extensive manufacture of "hollow ware" in Plymouth county.

ESPY'S CONICAL VENTILATOR.

The Richmond Enquirer gives a description of a new invention of Professor Espy, for clearing the holds of the United States' ships of foul air. The Enquirer says it prevents all chimneys from smoking, which smoke only when the wind blows. It draws out all the foul air from the hold of ships, when the wind blows, even to the amount of several hundred thousand gallons an hour, when there is a fresh breeze. It ventilates hospitals, coal mines, and all places subject to foul air, and keeps them entirely pure. It increases the draft of locomotives and steamboats, especially with a head wind.

SYNOPSIS OF NEWS, ETC.

A man has been committed to jail in Sullivan co., for having three wives. He must feel somewhat relieved.

The amount of sperm oil from the whale fishery, for the year 1841, was 4,965,754 gallons; of whale and fish oil, 6,362,661 gallons—making a sum total of 11,328,415 gallons.

The leather and shoe business is the largest manufacturing interest in the United States, producing commodities annually valued at more than $50,000,000. Massachusetts alone realises $18,000,000 from the manufacture of leather, employing 40,000 persons, 15,000 of whom are females. The relative cost of Boston and Paris boots and shoes is as sixty-six cents to one dollar. The Boston manufacturer consumes the provisions of our agriculturists, while the Paris laborer takes nothing but our precious metals.

$1,400,000 are employed in the manufacture of buttons in Yankeeland, giving employment and subsistance to 10,000 persons, who turn out $1,500,000 worth in a year.

There are already 141 factories in the cotton growing States. Capital $1,700,000; annual product $1,200,000.

The value of combs made in the United States, is $1,700,000. Brushes $1,75,000.

A silk manufacturing company has gone into operation in Nashville, Tennesse.

By an act of the last session of the Massachusetts legislature, the names of about seventy five persons are changed. For instance, Cynthia Maynard Gay, takes the name of Helen Wheeler; James Lobdell Holmes the name of Pelham Holmes; Dolly Ann Francian Butterfield is now Fraucian Ann Bolles; Ozias Hoar, Leonard Russell Hoar, Eley Barney Hoar, Celia Hoar, Armenia Knowlton Hoar, Lamira Ophelia Hoar, and Leonard Sikes Hoar, take the surname of Hudson.

By the notices put up in Middlesex, New Jersey, it would appear that carpenters and masons are in demand in and about Rahway, Matuche and Brunswick, N. J.

There are about £25,000,000, of British capital invested in American State bonds, banks, canal and railroad shares.

It appears that the six hundred paper mills in the United States annually consume rags, old canvass, rope, &c., out of which paper is made to the enormous sum of *six millions eight hundred thousand dollars!* an amount greater than the entire exports of the thirteen American colonies seventy years ago.

Another use for India rubber has been devised at the South. Ninety-three bales of cotton, stored in bags of this article, were floated down the Tombigbee and Alabama, to Mobile, and arrived in a perfectly safe condition. The bales weighed five or six hundred pounds, each, and drew only three and a half inches of water.

It is said that no application has yet been made for the benefit of the bankrupt law, from the State of Mississippi; we presume they need no legal release from their debts, but each "repudiates" on his own hook.

It is stated that 118 lives have been lost in Lake Michigan, since 1834; and also 89 vessels with property valued at $1,000.000.

A State Convention of county Superintendents of Common Schools, will be held at Utica on the first Wednesday in May next.

Mr. Riley Ferris, a highly respected farmer of Genoa, Cayuga county, was almost instantly killed by his flax machine on the 25th ult. He was 52 years old, and left a wife and eleven children.

Adam Waldie, the celebrated publisher of 'Waldie's Circulating Library,' and one of the oldest and most respectable printers in Philadelphia, died on Friday morning, 8th inst.

The whole value of wrought iron made annually in this country, is $25,765,330; of iron smelted annually, $10,422,000; capital employed in the iron trade exclusive of wood, land, and mines, $22,500,000; capital employed in coal and iron mines, and wood lands, $3,000,000.

The value of all the property cleared at the collector's offices on the New York State canals, in 1841, is $92,202,929.

The amount of dead loss at which the British West India line of steamers is supported, is estimated at £10,080 each boat, making an aggregate of three millions and a half. Of this enormous sum government shoulders one million—the residue falls on the Company.

An old man named John Newall, was found murdered near Auburn in this state. The murderer was arrested by his side; his name, Whiskey Bottle.

Four steamboats left St. Louis recently for New Orleans, with nineteen hundred tons of the products of Missouri and Illinois.

A recent village debate, in Vermont, upon the question "ought a young man to follow a gal, after she give him the mitten?" was duly argued *pro and con*—and then the President decided that "*he had'nt ough'ter.*"

The Mayor and Alderman of Boston have resolved to license no person to sell spirituous liquors during the ensuing year.

There is a very singular case of malformation in the shape of a hog, now exhibiting at No. 133 Ann street. The *critter* has six legs, and double functions of body. This is a rare opportunity to see dame nature in one of her most singular freaks.

A locomotive and train of cars, in crossing the Congaree, S. C. Swamp, was stopped by catterpillars. The iron rail was covered for miles with millions, until the wheels of the cars grew so slippery they refused to turn, and had it not been for the free use of sand, the cars would have been truly *stopped* in the swamp by *catterpillars*.

The extensive paper mill of S. H. Byrne, & Co. in Willimantic, Ct. was destroyed by fire on Friday morning, with all its contents. Estimated loss $18,000.

We learn from Bicknell's Reporter, that the amount of capital invested in manufactures in Georgia, is $2,899,565: ditto, in Alabama, $2,130,064.

There are 500 square rigged vessels lying at New York and Brooklyn, of which 170 are idle—no crews, no captains, no freights—most of them for sale, and no buyers.

Moose hunting seems to be a favorite sport with the British officers at Montreal; as on a recent expedition against those creatures, no less than twenty-eight were killed and brought in.

In Brazil, Protestants are not allowed to build churches or in any way to show publicly their dissent from the established religion.

Mr. David Little, tailor, of Hagerstown, in Maryland took his life on Saturday last by hanging himself. He had fastened the rope to the ceiling, and to effect his purpose was compelled almost to go on his knees.

There were 40,000 letters and 40 bags of newspapers brought by the Unicorn on her last trip—the largest mail ever received in the country. The New York city postage alone amounted to $3,300.

Among the numerous Literary curiosities in the Library of the late celebrated Dr. Kloss of Frankfort, has been discovered a volume, hitherto unknown it, is said to classical readers, comprising the Epistolary Correspondence of the renowned philosopher Diogenes, translated into Latin by Francesca Aretini, from the original Greek, and by him dedicated to Pope Pius II: printed as early as A. D. 1492.

In 1841 there were published in Paris, 8036 works—of which 6300 were in various languages; 1163 illustrated with prints, engravings, lithographs, &c.; 145 with maps, charts, plans, &c.; and 423 musical compositions.

Some years ago, a wealthy Englishman, who then resided in Philadelphia, purchased stock in the United States Bank to the amount of $40,000. He afterwards invested in it the fortune of his wife, which was $20,000. The sum of $10,000 was left to her afterwards by legacy; and this was also deposited in the United States Bank. They now reside near Camden, and the wife takes in sewing to support the family.

Major Downing gives the following advice: "If you want to trade safely, borrow ice in August, and agree to return the same quantity in January; for every other bargain is unsartain.

Life is a brass farthing; and in the toss up between fate and each human being, high birth and low birth, riches and poverty, wisdom and folly, learning and ignorance, virtue and vice, are but other names for *head and tail*.

Mr. Gellibrand, from Russia, who recently visited this country, states that the people of Finland, (as of Sweden,) *all read*. No one is allowed to be married who cannot read, and *mothers* are school teachers.

One of the members of the Virginia Legislature, it is said, just before he started for home, went round to most of the stores and got *samples* of their coffee—so that he finally trotted off with his saddle bags well filled with the very best that the market afforded.

It is not enough that we take things for granted because our fathers did before us. We should inquire into the whys and wherefores. A spirit of inquiry is a good discipline for the mind.

Some 14 years since Capt. D. Wilson of Wrentham, Mass. was struck upon the right eye by a hoop pole accidently thrown by a deaf and dumb brother. He lost his eye. A few weeks since a hoop pole was thrown by his son which accidentally struck his left eye. He is therefore now blind.

Fine codfish are taken daily, with hook and line, from the bridges between Boston and Charlestown.

Mr. Samuel Canby, of Wilmington, Delaware, sold a cow and calf last week for $800, cash.

BROKEN BANKS.

The following schedule, showing the rates at which the notes of sundry broken banks of this state are redeemed, if redeemed at all, by the comptroller, will be found convenient for reference. It is copied from the Albany Daily Advertiser:

Notes redeemed by the comptroller at par:

City Bank of Buffalo.	Commercial Bank, N. Y.
City Trust, N. Y.	Wayne County Bank.
Chelsea Bank.	Lafayette Bank, City of N. Y.

Notes redeemed by the comptroller at the following rates:

	Stock &c.	Stock & Ext. &c.
Binghamton Bank,	70	74
Cattaraugus Co. Bank,	85	77
Bank of Lodi,	83	97
Bk of Western N.Y. Rochester,	75	
Bank of Commerce, Buffalo,	76	
U. S. Bank, "		77
Mechanics' Bank, "		63
Erie County Bank, "	72	60
Phenix Bank, "		72
Bank of America, "	78	76
Merchants' Ex. Bank, "	81	65
Union Bank, "	61	
Tonawanda Bank,	69	
Tenth Ward Bank,	94	
Farmers' Bank Seneca Co.,	par	74
Millers' Bank, Clyde,	par	94

Banks whose notes are not redeemed by the comptroller:

Allegany Co. Bank.	Washington Bank.
Bank of Buffalo.	James' Bank.
Commercial Bank, Buff.	St. Lawrence Bank.
Staten Island Bank.	Commercial Bank, Oswego.
Bank of Ogsn.	Clinton Co. Bank.
Farmers' Bank of Geneva.	

MINIATURE PAINTING ON IVORY.

D. WAGNER, Miniature Painter, has taken a room in Down's New Building, corner of State and South Market streets, where he respectfully invites the citizens to call and see his specimens. This room is No. 22, 3d floor, entrance from either State or Market sts.

☞ IMPORTANT WORK!

Now in the course of Publication,

A DICTIONARY OF ARTS, MANUFACTURES AND MINES,

Containing a clear exposition of their principles and practice: By Andrew Ure, M. D., F. R. S., M. G. S., M. A. S., London, Mem. Acad. N. S., Philadel., S. Ph. Soc. N. Germ. Hanov., Mulii., &c. &c. &c. ☞ Illustrated with one thousand two hundred and forty-one engravings. ☜

This is unquestionably the most popular work of the kind ever published, and a book most admirably adapted to the wants of *all classes of the community*. The following are the important objects which the learned author endeavors to accomplish:

1st. To instruct the Manufacturer, Metallurgist and Tradesman in the principles of their respective processes, as to render them, in reality, the masters of their business; and to emancipate them from a state of bondage to such as are too commonly governed by blind prejudice and a vicious routine.

2dly. To afford Merchants, Brokers, Druggists, Druggists and Officers of the Revenue, characteristics descriptions of the commodities which pass through their hands.

3dly. By exhibiting some of the finest developements of Chemistry and Physics, to lay open an excellent practical school to students of these kindred sciences.

4thly. To teach Capitalists, who may be desirous of placing their funds in some productive branch of industry, to select, judiciously, among plausible claimants.

5thly. To enable gentlemen of the Law to become well acquainted with the nature of those patent schemes which are so apt to give rise to litigation.

6thly. To present to Legislators such a clear exposition of the staple manufactures, as may dissuade them from enacting laws which obstruct industry, or cherish one branch of it to the injury of another.

And lastly, to give the general reader—intent, chiefly on *Intellectual Cultivation*—views of many of the noblest achievements of Science, in effecting those grand transformations of matter to which Great Britain and the United States owe their paramount wealth, rank and power among the nations of the earth.

The latest Statistics of every important object of Manufacture are given from the best, and usually from official, authority, at the end of each article.

The work will be printed from the 3d London edition, which sell for $12 a copy. It will be put on good paper, in new brevier type, and will make about 1400 8vo. pages. It will be issued in twenty-one semi-monthly numbers, (in covers) at 25 cents each, payable on delivery.

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Any one leaving his address at the above place, will have the numbers of the work delivered to him regularly on the above terms.

Mr. Jones is now sole agent for the above work in this city, to whom application can be made at the News Room, corner of State street and Broadway.

MISCELLANY.

APPROACHING SUMMER.

BY JOSEPH H. BUTLER.

Bright Summer with her fragrant breath
Again is drawing near,
When Nature's face shall wear a smile
And skies be soft and clear,
And streams be bubbling out their joy
As down the hills they run,
Like rills of purest silver ore
All molten by the sun!
And on the lake so deeply blue
The water flowrets lie,
With lips of red, and eyes of love,
Fast gazing on the sky!
While all the deep green woods around
With melody is rife,
And not a sod, or aged tree,
But teems with mystic life!
Birds on the wing, and bees on flowers,
And insects glancing by;
And, beautiful as rainbow hues,
The painted butterfly!
See how the morning glory's look
To heaven, with eyes of blue,
And ask, in silent eloquence,
For drops of silver dew.
Fair lillies lift their snowy cups
To catch the gentle rain,
That with renewing strength revives
The verdure of the plain.
Oh! beautiful the young rose buds
Expand their tender leaves,
That grateful to their inmost hearts
The honied dew receives!
It is indeed a 'time of flowers,'
And joy, and music sweet;
An azure heaven above our heads,
And gems beneath our feet.
O Summer! there are happy ones
To gladly welcome thee:
But can thy smile restore again
Lost health and joy to me?
Before me clouds of midnight gloom
Their dusky wings expand,
And cruel storms drive on life's barque
To the dim spirit land.
Father of all—man's only friend!
O grant thy helping power:
Array with light Death's sable cloud,
In life's most trying hour:
Cheer me with visions of that clime
Where sickness cannot come:
Land of immortal, fadeless flowers,
The parted spirit's home.

Troy, 1842.

NATURAL CURIOSITIES IN THE UNITED STATES.

Two of the greatest natural curiosities in the world are to be found within the United States, and yet scarcely known to the best informed of our geographers and naturalists. The one is a very beautiful waterfall in Franklin county, in the State of Georgia, the other a stupendous precipice in Pendleton district, South Carolina. The Tuccoa fall is much higher than the falls of Niagara; the column of water is propelled beautifully over a perpendicular rock, and when the stream is full, it passes down the steep without being broken.

The Table mountain in Pendleton district, S. C. is an awful precipice of 600 feet. Very few persons, who have once cast a glimpse into the almost boundless abyss, can again exercise sufficient fortitude to approach the margin of the chasm; almost every one, looking over, involuntarily falls to the ground senseless, nerveless, and helpless, and would inevitably be precipitated, and dashed to atoms, were it not for the measures of precaution and security that have always been deemed indispensable to a safe indulgence of the curiosity of the visitor or spectator. Every one, on proceeding to the spot whence it is usual to gaze over the wonderful deep, has in his or her imagination, a limitation, graduated by a reference to distances with which the eye has been familiar. But in a moment, eternity, as it were, is presented to the astonished senses; and the observer is instantly overwhelmed. He soon recovers from the first surprise, and in a wild delirium surveys a scene which, for a time, he is unable to define by description or limitation.

CINDERELLA.

The origin of the tale from which this pantomime was adopted, is sufficiently curious. It was about the year 1730 that a French actor, of equal talent and wealth, named Thevenard, in passing through the streets of Paris, observed upon a cobbler's stall, the shoe of a female, which struck him by the remarkable smallness of its size. After admiring it for some time, he returned to his house; but his thoughts reverted to the shoe with such intensity, that he reappeared at the stall the next day; but the cobbler could give him no other clause to the owner, than that it had been left in his absence, for the purpose of being repaired. Day after day did Thevenard return to his post to watch the reintegration of his slipper, which proceeded slowly, nor did the proprietor appear to claim it. Although he had completed the sixtieth year of his age, so extravagant became his passion for the unknown fair one, that he became (were it possible for a Frenchman of that day to be so!) melancholy and miserable. His pain was however, somewhat appeased by the avatar of the little foot itself, appertaining to a pretty and youthful girl in the very humblest class of life. All distinctions were levelled at once by love; the actor sought the parents of the female, procured their consent to the match, and actually made her his wife.

THEORY OF MARRIAGE.

There was a merry fellow who supped at Pluto's three thousand years ago, and the conversation turning upon love and the choice of wives, he said, "he had learnt from a very ancient tradition that men had been originally created male and female, each individual being provided with a duplicate set of limbs, and performing his locomotive functions with a kind of rotary movement, as a wheel; that he became in consequence so excessively insolent that Jupiter, indignant, split him in two; and since that time that each half runs about the world in quest of its other half; if the two congenial halves meet, they are a very loving couple; otherwise they are subject to a miserable, scolding, peevish, and uncongenial matrimony. The search he said was rendered difficult, for the reason that one man alighting upon a half that did not belong to him, another did necessarily the same, till the whole affair was thrown into irretrievable confusion."

HORRORS OF WAR.

The following passage affords a terrible picture of war: "At Helder a Frenchman and a Highlander had charged upon each other; the Frenchman had parried the thrust of the Highlander, and run him through the body; the Highlander had then let go his hold of the but end of his piece with his right hand, and seized the wrist of the Highlander, to pull it away from his throat; but he had been unable; the Frenchman had then staggered backwards, and had fallan on his back, and the Highlander above him still retaining hold of his throat; and in the struggle which had taken place, the head of the Highlander had projected as far over the head of the Frenchman as to bring that part of the body of the former in which the bayonet was, over the mouth of the latter; and in this posture both had expired. Those who saw it, said the sight was truly shocking.

The Frenchman was fairly strangled; his eyes were out of their sockets; his tongue was greatly swelled, and thrust far out of his mouth, in which the blood from the wound of the Highlander was running.

ANECDOTE OF DR. FRANKLIN.

In one of the assemblies in America, wherein there was a majority of Presbyterians, a law was proposed to forbid the praying for the king by the Episcopalians; who however, could not conveniently omit that prayer, it being prescribed in their liturgy. Dr. Franklin, one of the members, seeing that such a law would occasion more disturbance than it was worth, said, that he thought it quite unnecessary, "for," added he, "those people have, to my certain knowledge, been praying constantly, these twenty years past, that *'God would give to the King and his Council wisdom:'* we know that not the least notice has ever been taken of that prayer; so that it is plain they have no interest in the Court of Heaven." The house smiled, and the motion was dropped.

GARRICK'S EYE.

Miss Pope was one evening in the Green-Room, commenting on the excellencies of Garrick, when among other things, she said, "he had the most wonderful eye imaginable—an eye, to use a vulgar phrase, that would penetrate through a deal board." "Aye," cried Wewitzer, "I understand; what we call a *gimblet eye*."

Novella the daughter of a celebrated Doctor of Laws at the University of Bologna, in the fourteenth century, was so erudite as to fill her father's chair when sickness, indolence, or business, prevented his fulfilling the duties of his profession himself. Her beauty, nevertheless, was so great; that she was obliged to lecture behind a curtain, lest her charms should distract the attention of the students.

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Subscriptions will be received by the following persons, to whom money may be paid.

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ROB'T CUNNINGHAM.

Schenectady, Nov. 26, 1841.

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I have during the past year, put on a number of Caldwell and Cameron's patent mortice and knob locks, and consider them the easiest to put on, and the best working lock I have ever used or seen. 37 JOHN RAYSIDE, Albany.

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